



August 22, 2005

Ms. Jan Palumbo, RCRA Project Manager United States EPA, Region 10 1200 Sixth Avenue, Mail Stop WCM-121 Seattle, WA 98101

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Office of Air Waste & Toxics

Subject:

Nonaqueous Phase Liquid Investigation Work Plan

J.H. Baxter & Co.'s Arlington Facility Docket No. RCRA-10-2001-0086

Dear Ms. Palumbo:

J.H. Baxter & Co., Inc (Baxter) is submitting this Nonaqueous Phase Liquid (NAPL) Investigation Work Plan to the U.S. Environmental Protection Agency (EPA). This NAPL Work Plan incorporates the investigation of light NAPL (LNAPL) and collection of NAPL samples for chemical analysis, as discussed in the following text.

## **Background and Objectives**

The Baxter Arlington facility occupies approximately 52 acres in Arlington, Washington. The site has been used for wood treating since the late 1960's, and has used oil-based wood treating solutions including creosote and pentachlorophenol. During previous investigations, NAPL (occurring as light nonaqueous phase liquid [LNAPL]) was observed in two shallow wells (MW-12 and MW-13), located in the central portion of the facility (Figure 1). Although Baxter has periodically measured NAPL thickness in these two wells, no investigation has been conducted to evaluate the potential for routine recovery of NAPL.

As part of the Site Investigation and Corrective Measures Study process ongoing at the facility, Baxter has elected to evaluate the potential for systematic extraction of NAPL from existing wells, as discussed with EPA on August 10, 2005. Baxter anticipates that this work will be conducted under the provisions of Paragraph 63 of the Administrative Order on Consent.

This investigation will include the collection and quantification of recoverable NAPL from MW-12 and MW-13. The primary objective of this investigation is to determine the amount of NAPL that can be recovered, and to collect additional data that will be used for remedial action decisions.



## Scope of Work

The proposed NAPL investigation includes periodic water level/NAPL measurements and purging of NAPL from MW-12 and MW-13 using low-volume submersible pumps. NAPL depth and thickness measurements will be collected with an electronic interface probe (or equivalent). Following collection of water level/NAPL data from each well, a pump will be placed at the top of the liquid level in the well. The pump will be operated until all NAPL has been extracted from the well (based on visual observation of the discharge). The extracted fluids will be contained in a five-gallon bucket (or equivalent), and the volume of NAPL and groundwater will be estimated and recorded on field forms.

Initially, each well will be tested on a weekly basis. If the NAPL volume recovers to similar volumes within a one-week period, the frequency of testing will be increased. Conversely, if little or no NAPL is recovered in subsequent weeks (with respect to the initial test), the frequency of testing will be decreased.

The wells will be purged of NAPL using dedicated Whale Mini-Purger submersible pump (or equivalent). The Whale pumps are low-cost, single stage, battery operated pumps that can lift fluids from depths up to 60 feet. While these pumps are not specifically designed to remove NAPL or last in a corrosive environment, they are inexpensive and can be readily replaced if necessary. If the NAPL is too viscous to be effectively removed from the wells using the Whale pump, an alternate pump or stainless steel bailer will be deployed. EPA will be advised if any significant changes in the investigation program are necessary.

NAPL extraction data will be recorded in the field, including depth to water, NAPL thickness, purging time, and volumes of water and NAPL extracted. An example form is presented as Figure 2.

During the course of the investigation, one sample of NAPL will be collected and submitted for laboratory analysis of semivolatile organic compounds and hydrocarbon identification by EPA Method 8270C and NWTPH-HCID, respectively. In addition, specific gravity measurements will be conducted on the NAPL using hydrometers at the onsite laboratory.

Fluids extracted from the wells will be temporarily stored in five-gallon buckets (or equivalent) prior to transfer to the onsite oil-water separator. Fluids will be transferred to the oil-water separator immediately after each testing event. Following separation, the recovered NAPL will be re-used as a treating product. Recovered groundwater will be used as plant makeup water, and will not be discharged.

Following a minimum of eight weeks of testing, the data will be examined to assess the viability of installing a semi-permanent NAPL extraction system, periodic NAPL evacuation, or additional extraction wells. Based on preliminary evaluation of data, additional testing may be conducted at the facility. Pending final evaluation of the data, Baxter will meet EPA to discuss further actions at the facility.

All field work will be conducted in accordance with the existing Site Investigation Health and Safety Plan.

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## Reporting

All NAPL investigation activities, quantities of NAPL extracted, and laboratory data will be summarized and presented to EPA in a letter report. NAPL extraction data may be also presented to EPA if any significant endpoints are reached which require consultation with EPA.

We look forward to working with you on this project. Upon your approval of this plan, Baxter will initiate NAPL the investigation activities described above within two weeks. Please do not hesitate to contact Stephen Barnett of Premier at (503) 241-8172, or me at (541) 689-3801 if you have any questions or comments.

Sincerely,

RueAnn Thomas

**Environmental Programs Director** 

cc: Georgia Baxter, J. H. Baxter & Co.

Mary Larson, J. H. Baxter & Co.

Rene Fuentes, EPA Region 10

J. Stephen Barnett, Premier Environmental Services, Inc.

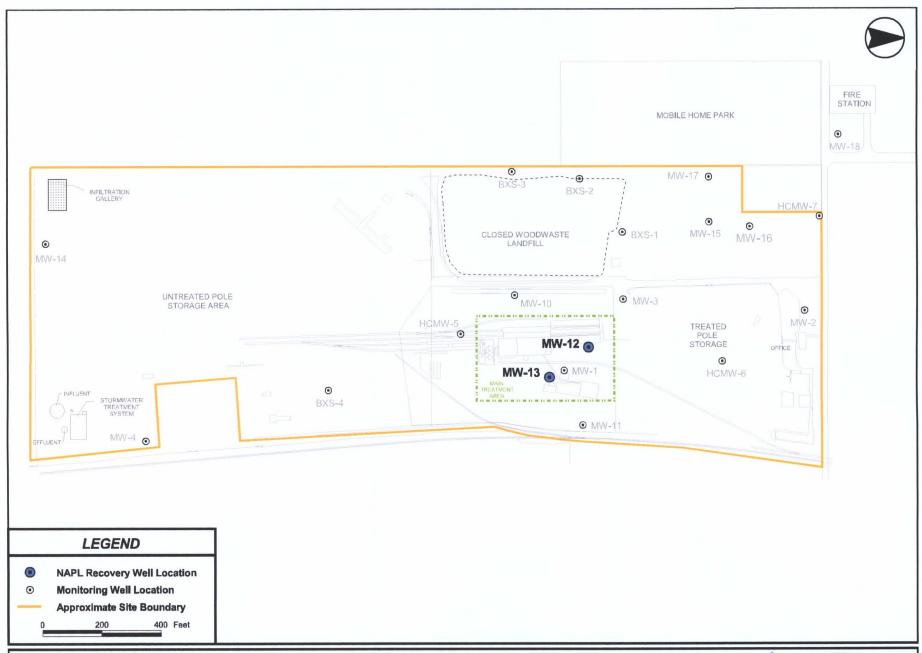


Figure 1. NAPL Recovery Wells



NAPL RECOVER	Y	FC	RM
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CILITY:Arlington, WA Facility	ELL ID:
L DIAMETER:	ILITY: Arlington, WA Facility
	. DEPTH:
METHOD:	METER:
	NG METHOD:

DATE	START	END	DEPTH TO		LNAPL		DNAPL	EXTRACTION VOLUMES		3	REMARKS	
DATE	DATE TIME T	TIME	ME WATER	DEPTH	THICKNESS	DEPTH	THICKNESS	LNAPL	DNAPL	WATER	TOTAL	REMARKS
												12-7

FIGURE 2